

Claims

1. A pressure-holding valve for a fuel injection system including a high-pressure region and a low-pressure region, which valve is equipped with a valve housing (20), which has a first connection (23) that is connectable to the low-pressure region and a second connection (24) that is connectable to the return (16) of a fuel injection valve device (15), which valve housing (20) contains a reciprocating valve cup (25) that is prestressed in opposition to the prestressing force of a first spring device (29) and has a through opening (31) that a closing element (32) is able to close, which closing element (32) is prestressed in opposition to the prestressing force of a second spring device (33) in order to maintain a minimum pressure in the return (16), characterized in that the valve housing (20), between the first connection (23) and the valve cup (25), contains a pressure relief device (35, 36, 37) that can be actuated from the outside.
2. The pressure-holding valve according to claim 1, characterized in that the pressure relief device includes a pressure pin (35) that protrudes from the first connection (23) toward the valve cup (25).
3. The pressure-holding valve according to claim 2, characterized in that the pressure pin (35) protrudes from a positioning disk (36) that is clamped between the second spring device (33) and the valve housing (22).
4. The pressure-holding valve according to claim 3, characterized in that between the positioning disk (36) and the valve housing (22), a fixing disk (37) is provided, which

serves to fix a filter element (38) between the positioning disk (36) and the fixing disk (37).

5. The pressure-holding valve according to claim 4, characterized in that through openings (41 to 44; 51 to 56) are provided in the fixing disk (37) and the positioning disk (36).

6. The pressure-holding valve according to claim 5, characterized in that the through openings (41 to 44; 51 to 56) in the fixing disk (37) and in the positioning disk (36) are designed and arranged to assure a passage of fuel through the fixing disk (37) and through the positioning disk (36) regardless of a relative rotation of the two disks in relation to each other.

7. The pressure-holding valve according to claims 4 through 6, characterized in that on the side oriented away from the positioning disk (36), the fixing disk (37) has an annular bead (39) on the radial outside.

8. A tool for reducing the pressure in a pressure-holding valve (18) according to one of the preceding claims, characterized in that the tool (70) has a cup-shaped base body (72) with a bottom (73), from which an essentially circular, cylindrical circumference wall extends, whose inner diameter is slightly greater than the outer circumference of the pressure-holding valve (18) in the region of the first connection (23).

9. The tool according to claim 8, characterized in that on the inside of the tool (70), an arbor (75) extends from the bottom (73) in the direction of the longitudinal tool

axis (74); the outer diameter of this arbor (75) is slightly smaller than the inner diameter of the first connection (23) and its length is greater than the length of the first connection.

10. A set including a pressure-holding valve (18) according to one of claims 1 through 7 and a tool (70) according to one of claims 8 and 9.

11. A fuel injection system that includes a low-pressure region and a high-pressure region from which a fuel injection valve device (15) is supplied, which is connected to the low-pressure region via a return (16), characterized in that a pressure-holding valve (18) according to one of claims 1 through 7 is connected to the return (16) of the fuel injection valve device (15) and to the low-pressure region.